

What is Claimed:

- 1 1. A receiver for a firearm, said receiver comprising:
2 a front, at least two sides, and a bottom;
3 a front recess to receive a barrel or barrel extension, said front recess
4 defined by a channel in said receiver which is open longitudinally along a longitudinal slit
5 in said receiver;
6 a load/eject recess open to said front recess and to at least one side or said
7 bottom of said receiver, said load/eject recess sized to allow the insertion and removal of
8 a cartridge from said receiver;
9 said slit and said load/eject recess together forming a single opening to
10 said receiver whereby said receiver can expand to allow the insertion of a barrel or barrel
11 extension into said front recess.
- 1 2. The receiver of claim 1 wherein said slit and said load/eject recess
2 are open to said bottom of said receiver.
- 1 3. The receiver of claim 1 further comprising a clamping hole in said
2 receiver disposed through said longitudinal slit, said clamping hole sized to receive
3 clamping means whereby said slit is compressible by said clamping means to apply a
4 compressive force on a barrel or barrel extension inserted into said front recess.
- 1 4. The receiver of claim 2 wherein said clamping means is a bolt.
- 1 5. The receiver of claim 1 wherein said front recess is sized to receive
2 a barrel extension.
- 1 6. The receiver of claim 2 wherein said receiver has a plurality of
2 clamping holes.

1 7. The receiver of claim 1 wherein said receiver is comprised of a
2 material selected from the group consisting of aluminum, magnesium, or alloys
3 comprised of aluminum or magnesium.

1 8. The receiver of claim 1 wherein said receiver is comprised of a
2 polymeric material.

1 9. A receiver for a firearm, said receiver comprising:
2 a front and a bottom;
3 a front recess to receive a barrel extension, said front recess defined by a
4 channel open longitudinally at its bottom along a longitudinal slit;

5 a load/eject recess open to said front recess and to said bottom of said
6 receiver to allow the insertion and removal of a cartridge from said bottom of said
7 receiver; and

8 at least one clamping hole in said receiver, said clamping hole disposed
9 through said longitudinal slit, said clamping hole sized to receive clamping means;

10 said slit and said load/eject recess together forming a single opening along
11 said bottom of said receiver, and

12 said front recess is expandable and contractible along said slit whereby
13 said slit is compressible by said clamping means to apply a compressive force on a barrel
14 extension inserted into said front recess.

1 10. The receiver of claim 9 further comprising clamping means.

1 11. The receiver of claim 9 wherein said receiver has a plurality of
2 clamping holes.

1 12. The receiver of claim 9 wherein said receiver is comprised of a
2 material selected from the group consisting of aluminum, magnesium, or alloys
3 comprised of aluminum or magnesium.

1 13. The receiver of claim 9 wherein said receiver is comprised of a
2 polymeric material.

1 14. A barrel extension for a firearm barrel, said barrel extension
2 comprising:
3 a metallic tube having an outer surface; and
4 a protrusion extending radially outward from said outer surface of said
5 metallic tube.

1 15. The barrel extension of claim 14 wherein said protrusion is a pin.

1 16. A safety mechanism for a firearm to prevent unintentional firing of
2 the firearm, the safety mechanism comprising:

3 a bolt having:

4 a bolt head disposed at a distal end,

5 a proximal end, and

6 a longitudinal channel disposed in said bolt to house a firing pin;

7 a firing pin disposed in said longitudinal channel of said bolt, said firing

8 pin having a distal end at said bolt head and a proximal end

9 extending out of said longitudinal channel to allow activation of

10 said firing pin by a hammer;

11 a safety bar disposed at said proximal end of said firing pin wherein
12 rotation of said bolt into a firing position rotates said safety bar into an activation position
13 whereby said firing pin can be activated by a hammer striking said safety bar, and rotation
14 of said bolt into a non-firing position rotates said safety bar out of said activation position
15 whereby a falling hammer cannot strike said safety bar or firing pin.

1 17. The safety mechanism of claim 16 wherein said safety bar is
2 rectangular.

1 18. The safety mechanism of claim 16 wherein said safety bar has at
2 least one curved edge.

1 19. The safety mechanism of claim 16 wherein the bolt rotation
2 between said activation position and said non-firing position is an angle between 20° and
3 50° from the bolt's fully closed position.

1 20. The safety mechanism of claim 18 wherein the bolt rotation
2 between said activation position and said non-firing position is an angle between 10° and
3 20° from the bolt's fully closed position.

1 21. A firearm comprising:

2 a barrel;

3 a barrel extension attached to said barrel, said barrel extension having a
4 protrusion extending radially therefrom; and

5 a receiver, said receiver comprising:

6 a front, at least two sides, and a bottom;

7 a front recess to receive a barrel or barrel extension, said front
8 recess defined by a channel in said receiver which is open
9 longitudinally along a longitudinal slit in said receiver; and

10 a load/eject recess open to said front recess and to at least one
11 side or said bottom of said receiver, said load/eject recess sized
12 to allow the insertion and removal of a cartridge from said
13 receiver;

14 said slit and said load/eject recess together forming a single
15 opening to said receiver whereby said receiver can expand to
16 allow the insertion of a barrel or barrel extension into said front
17 recess;

18 whereby said slit accepts said protrusion to guide said barrel extension into
19 said receiver.

1 22. The firearm of claim 21 further comprising a clamping hole in said
2 receiver disposed through said longitudinal slit, said clamping hole sized to receive
3 clamping means whereby said slit is compressible by said clamping means to apply a
4 compressive force on said barrel extension.

1 23. The firearm of claim 22 wherein said clamping means is a bolt.

1 24. The firearm of claim 21 further comprising a safety mechanism,
2 said safety mechanism comprising:

3 a bolt having:

4 a bolt head disposed at a distal end,

5 a proximal end, and

6 a longitudinal channel disposed in said bolt to house a firing pin;

7 a firing pin disposed in said longitudinal channel of said bolt, said firing

8 pin having a distal end at said bolt head and a proximal end

9 extending out of said longitudinal channel to allow activation of

10 said firing pin by a hammer; and

11 a safety bar disposed at said proximal end of said firing pin wherein

12 rotation of said bolt into a firing position rotates said safety bar into an activation position

13 whereby said firing pin can be activated by a hammer striking said safety bar, and rotation

14 of said bolt into a non-firing position rotates said safety bar out of said activation position

15 whereby a falling hammer cannot strike said safety bar or firing pin.